

Please amend claim 8 as follows:

8. (amended) A method for fusion of expressed proteins, said method comprising the steps of:
- (a) constructing a first plasmid comprising at least one nucleic acid sequence that encodes a first modified intein, wherein said first modified intein is capable of thiol reagent-induced cleavage to produce a thioester at the C-terminal of said first target protein;
 - (b) constructing a second plasmid comprising at least one nucleic acid sequence that encodes a second intein having C-terminal cleavage activity, wherein said second intein is capable of cleavage to produce a said second target protein having a specified N-terminal;
 - (c) expressing [generating] at least one C-terminal thioester-tagged first target protein from said first plasmid of step (a);
 - (d) expressing [generating] at least one second target protein having a specified N-terminal from said second plasmid of step (b); and
 - (e) ligating said first target protein of step (c) with said second target protein of step (d).

Please amend claim 16 as follows:

16. (amended) A method for cyclic fusion of an expressed protein, said method comprising the steps of:

- (a) constructing a plasmid comprising at least one nucleic acid sequence that encodes a target protein, at least one nucleic acid sequence that encodes a first intein having N-terminal cleavage activity, and at least one nucleic acid sequence that encodes a second intein having C-terminal cleavage activity, wherein said first intein is capable of thiol reagent-induced cleavage to produce a thioester at the C-terminal of said target protein and wherein said second intein is capable of cleavage to produce a specified amino acid at the N-terminal of said target protein;
- (b) expressing [generating] a C-terminal thioester-tagged target protein having a specified amino acid at its N-terminal from the plasmid of step (a); and
- (c) ligating the N-terminus of said target protein to the C-terminus of said target protein to produce a cyclic protein.

Please amend claim 17 as follows:

17. (amended) A method for polymerization of an expressed protein, said method comprising the steps of:

- (a) constructing a plasmid comprising at least one nucleic acid sequence that encodes a target protein, at least one nucleic acid sequence that encodes a first intein having N-terminal cleavage activity, and at least one nucleic acid sequence that encodes a second intein having C-terminal cleavage activity, wherein said first intein is capable of thiol reagent-induced cleavage to produce a thioester at the C-terminal of said target protein and wherein said second intein is capable of cleavage to produce a specified amino acid at the N-terminal of said target protein;
- (b) expressing [generating] a C-terminal thioester-tagged protein having a specified amino acid at its N-terminal from the plasmid of step (a); and
- (c) intermolecular ligation of said target proteins to yield a protein polymer.

Please amend claim 28 as follows:

28. (amended) A plasmid comprising at least one nucleic acid sequence that encodes a modified intein of any one of claims 22-27.